REMARKS

The present Amendment amends claims 1, 4, 6, 7, 10, 11, and 12 and leaves claims 2, 3, 5, 8, 9, 13, and 14 unchanged. Therefore, the present application has pending claims 1-14.

35 U.S.C. §112 Rejections

Claims 1-14 stand rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to point out and distinctly claim the subject matter that Applicant regards as the invention. The Examiner alleges that claim 1 contains errors, which also appear in claims 2-14. This rejection is traversed for the following reasons. Applicants submit that the features of the present invention, as now more clearly recited in claim 1-14, fully comply with the requirements of 35 U.S.C. §112, second paragraph.

(a) Regarding claim 1, line 2, the Examiner inquires as to whether "location information" should be replaced with "address". Applicants submit that location information refers to information indicating a location of a sector in a series of sectors, as clearly defined in both the claims and the specification. Specifically, the location information refers to whether the sector is a head sector, a tail sector, a sector located between a head sector and a tail sector, or in the case where there is only one sector, whether the sector is both a head sector and a tail sector.

For example, as described on page 6, line 10 to page 7, line 19 of the specification, and as shown in Fig. 2, item 210, location data area 210 includes a 2-bit area in which location information is stored. The location information may be set

as either "10", "01", "00", or "11". The 2-bit location information of "10" indicates that the sector is a head sector of the series of sectors, "01" indicates that the sector is a tail sector of the series of sectors, "00" indicates that the sector is neither a head nor a tail sector of the series of sectors, and "11" indicates that the sector is a head sector and also a tail sector of the series of sectors (i.e., the series of sectors consists of one sector).

By way of further example, as shown in Fig. 3(a), five sectors from N to N+4 are written. The first write request is "10", which indicates that sector N is a head sector. Sectors N+1 to N+3 are each "00", which indicates that sectors N+1 to N+3 are neither head nor tail sectors. Sector N+4 is "01", which indicates that sector N+4 is a tail sector.

As indicated by the examples provided above, the location information indicates a data positions (i.e., head, neither head nor tail, or tail) in a write request, and the location information distinguishes from an address. Therefore, Applicants submit that contrary to the Examiner's assertions, the use of "location information" does not render claims 1-14 indefinite, and that claims 1-14 fully comply with the requirements of 35 U.S.C. §112, second paragraph.

(b) Further regarding claim 1, line 1, the Examiner alleges that "common information" is not properly explained, and inquires as to whether it refers to information that all sectors share in common. As shown in Fig. 2, item 211, and as described on page 6, line 10 to page 7, line 24, common data area 211 is a 6-bit area in which common data is stored. The common data is information that is set to

the same value for all the sectors in a series of sectors, and varies every time a data write request is issued by a CPU or the like (*see*, specifically page 6, lines 19-23; page 7, lines 6-11; and page 8, lines 16-18). Sectors having the same common information are written using the same write request.

Figs. 3 and 4 provide examples of the use of common information, and these examples are fully explained in the accompanying text. Referring to Fig. 3(a), for example, and the accompanying text at page 8, line 3 to page 9, line 21, "A" refers to the common information in each of sectors N to N+4. That is to say, "A" is information that is set to the same value for each of sectors N to N+4 in the series of sectors shown in Fig. 3(a). The five sectors, N to N+4 in Fig. 3(a), are written by using the same write request "A".

Now referring to Fig. 3(b), a new data write request occurs and a write operation is performed for the sectors N+2 to N+5. As previously described, the common information varies each time a write request is issued. Thus, the common information is changed from "A" to "B", at the occurrence of the write request in Fig. 3(b), indicating that the sectors are written by using a write request "B" that differs from the write request "A" shown in Fig. 3(a).

Fig. 3(c) shows the expected results, if the write request is performed normally. That is, Fig. 3(c) shows where sectors N+2 to N+5 are written as requested by the write request of 3(b). Fig. 3(d) shows an abnormal result of a write request, such as when a data write omission in a sector unit occurs by a head voltage shortage or dust on the recording medium. As shown in Fig. 3(d), the

contents of sector N+3 have not been rewritten as requested by the write request shown in Fig. 3(b). That is to say, Fig. 3(d) shows where the original "00-A" of Fig. 3(a) remains in sector N+3, instead of the new "00-B" as requested by the write request of Fig. 3(b). As further described on page 9, lines 2-21, it is possible to detect that the data of sector N+3 is abnormal by reading location data and common data written in each of the continuous sectors of Fig. 3(d). When sequentially reading the data stored in the sectors N+2 to N+5 of Fig. 3(d), the location data of sector N+2 is first identified as a head sector ("10") of the series of sectors written by a single write process. Because this sector is a head sector, the next sector N+3 should be either a sector located between a head and tail sector ("00") or a tail sector ("01"). Furthermore, the common information in the next sector N+3 should be set to "B" because sector N+2 is set to "B". However, as shown in Fig. 3(d), the common information in sector N+3 is set to "A", while it should be set to "B". As a result, it is detected that the data stored in the sector N+3 is abnormal. The Examiner is also invited to read page 9, line 21 to page 11, line 15, which describes the detection mechanism shown in Fig. 4.

In view of the foregoing, Applicants submit that the use of "common information" does not render claims 1-14 indefinite, and that claims 1-14 fully comply with the requirements of 35 U.S.C. §112, second paragraph.

(c) Regarding claim 1, lines 7-8, the Examiner asserts that "set relating to the series of sectors" and "relating to" are unclear. Applicants submit that the features of

the present invention, as now more clearly recited in the claims, fully complies with the requirements of 35 U.S.C. §112, second paragraph.

Support for the amended claim language, i.e., "said common information being information that is set to an identical value for each sector in the series of sectors", may be found, for example, at page 6, line 10 to line 23. Furthermore, in response to the Examiner's question regarding the previously presented claim language, the Examiner is advised that "set" is being used a verb. In addition, "series of sectors" refers to the sectors being simultaneously written by the same write request.

(d) Regarding claim 1, line 8, the Examiner asserts that "varying every time data writing to the series of sectors occurs" is confusing. Applicants submit that the features of the present invention, as now more clearly recited in the claims, fully complies with the requirements of 35 U.S.C. §112, second paragraph.

Support for the amended claim language, i.e., "said common information being information . . . that varies with every single data write request issued for writing data to the series of sectors" may be found, for example, at page 7, line 6 to line 11. As previously discussed, when the series of sectors are written by the same write command, the common value is set. The common value set at the time of writing is different from the common value set at a previous time of writing. For example, the common value is set to "A" at the time of writing shown in Fig. 3(a). Next, the common value is set to "B" at the time of writing shown in Fig. 3(b). In this

way, the common value is set for each write request (*see*, e.g., page 6, line 10 to page 7, line 19).

Therefore, Applicants respectfully request the Examiner to reconsider and withdraw the 35 U.S.C. §112, second paragraph rejections.

In view of the foregoing amendments and remarks, Applicants submit that claims 1-14 are in condition for allowance. Accordingly, early allowance of claims 1-14 is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger, Malur & Brundidge, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. 500.43088X00).

Respectfully submitted,

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